

ACKNOWLEDGMENT OF COMPLETION REPORT

FOR

**ANN LEE URANIUM MINE SITE
STATE ROAD 509
GRANTS, MCKINLEY COUNTY, NEW MEXICO**

Prepared for

U.S. Environmental Protection Agency

Linda Carter, Project Officer
1445 Ross Avenue
Dallas, Texas 75202

Contract No. EP-W-06-042
TDD No. TO-0035-11-06-01
W.O. No. 20406.012.035.0643.01
NRC No. N/A
CERCLIS No. NMN000607165
FPN N/A
EPA SAM: Lisa Price
START-3 PTL: Patrick Buster

Prepared by

Weston Solutions, Inc.

Robert Beck, VP, P.E., Program Manager
70 NE Loop 410, Suite 600
San Antonio, Texas 78216
(210) 308-4300

07 December 2011



ACKNOWLEDGMENT OF COMPLETION REPORT

1. PROJECT IDENTIFICATION

Date: 07 December 2011

To: Lisa Price, Site Assessment Manager (SAM)
U.S. Environmental Protection Agency (EPA)
Region 6, Prevention and Response Branch

Through: Linda Carter, Project Officer (PO)
EPA Region 6, Program Management Branch

Through: Robert Beck, VP, P.E., Weston Solutions, Inc. (WESTON®)
EPA Region 6, Superfund Technical Assessment and Response Team (START-3)
Program Manager

From: Patrick Buster, WESTON
EPA Region 6, START-3 Project Team Leader

Subject: Acknowledgment of Completion Report: Ann Lee Uranium Mine
Grants, McKinley County, New Mexico
Contract No. EP-W-06-042
TDD No. TO-0035-11-06-01
W.O. No. 20406.012.035.0643.01
NRC No. N/A
FPN N/A
CERCLIS No. NMN000607165
Latitude: 35.4141971° North
Longitude: 107.7958923° West

Activities for this Technical Direction Document (TDD) were associated with investigating mine water discharge locations, sampling potentially impacted soil, sampling surface water, and sampling accessible groundwater wells in the area of the Ann Lee Uranium Mine Site in Grants, McKinley County, New Mexico. The EPA Region 6, Superfund Technical Assessment and Response Team (START-3) contractor, Weston Solutions, Inc. (WESTON), was tasked to provide technical assistance in this investigation under TDD No. TO-0035-11-06-01. The Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) number assigned to this site is NMN000607165. Geographic coordinates of the site were determined by START-3 using Google Earth.

2. SUMMARY OF ACTIONS

On 30 June 2011, the U.S. Environmental Protection Agency (EPA) Region 6 tasked START-3 to begin planning elemental uranium and radionuclide investigation activities for the Ann Lee Uranium Mine Site Project (the site). START-3 participated in a project kick-off meeting with EPA Site Assessment Manager (SAM) Lisa Price in July 2011 to discuss the scope of the TDD. U.S. EPA provided a mining inspection report of the Ann Lee Uranium Mine Site conducted on behalf of the New Mexico Department of Environment, along with well information and well location documents for review and background information (Attachment A). Prior to START-3 moving forward with the investigation activities, EPA SAM Price tasked the U.S. EPA Airborne Spectral Environmental Collection Technology System (ASPECT) aircraft team with performing reconnaissance of the Ann Lee Uranium Mine Site for identification of potential hazardous materials on-site.

The ASPECT aircraft conducted an overflight of the Ann Lee Uranium Mine Site on 23 August 2011. Results from the overflight indicated that uranium concentration levels found on-site were significantly lower than the surrounding area; more than 90 percent of the site was measured to have less than 5.000 average picocuries per gram (pCi/g) of uranium present. Less than 10 percent of the site was measured to have a radiation range of 5.000 pCi/g – 10.000 pCi/g present. In addition, results from the ASPECT overflight indicated low exposure rates and low count rates across the site. Results from the ASPECT aircraft overflight were mapped and are presented in Attachment B.

Based on the low levels of uranium and radiation measured across the mine site by the ASPECT aircraft team during the site overflight, EPA SAM Price determined that the START-3 investigation was not warranted at this time and directed START-3 to discontinue all work associated with the Ann Lee Uranium Mine Site under TDD No. TO-0035-11-06-01 in September 2011.

This final report was prepared as part of the requirements of the Technical Direction Document (TDD) No. TO-0035-11-06-01 and serves as documentation of work completed to date.

3. LIST OF ATTACHMENTS

A. Mining Inspection Report and Well Information

B. EPA – ASPECT Concentration Map

C. TDD No. TO-0035-11-06-01 and Amendment A

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The EPA Task Monitor did not provide final approval of this report prior to the completion date of the work assignment. Therefore, Weston Solutions, Inc. has submitted this report absent the Task Monitor's approval.

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The EPA Task Monitor has provided final approval of this report. Therefore, Weston Solutions, Inc. has submitted this report with the Task Monitor's approval.

ATTACHMENT A

MINING INSPECTION REPORT AND WELL INFORMATION

Declaration of Owner of Underground Water Right

t 24283

of ownership of a valid underground
and therein and that the same are true

Geo. B. Biny

424
Qurb
11/11

Subscribed and
My commission
Name of water

- Fractional or percentage interest claimed in well 100%
5. Quantity of water appropriated and beneficially used #93.55 acre-feet per annum
(feet depth or acre feet per acre)
- for industrial purposes
6. Acreage actually irrigated and with water right _____ acres
located and described as follows (describe only lands actually irrigated):

1958 MAR -5 AM 9:16
STATE ENGINEER OFFICE
SANTA FE, N.M.

7. Water was first applied to beneficial use September 16, 1957, and since that time has been used fully and continuously on all of the above described lands or for the above described purposes except as follows: *Now being used for construction work of uranium mines and mill located in said area. The well is equipped to produce 93.55 acre-feet per annum, which will be the amount to be beneficially used upon completion of mines and mill.

- STATE ENGINEERING EXPERIMENT NO. 10
RECEIVED
MAR 7 1958
F M
7.8 9.0 10.2 11.4 12.6 13.8 15.0

B-375



New Mexico Office of the State Engineer

Point of Diversion by Location

(with Owner Information)

(acre ft per annum)					(quarters are 1=NW 2=NE 3=SW 4=SE)										
					(quarters are smallest to largest) (NAD83 UTM in meters)										
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Grant	Source	6416	4	Sec	Tws	Rng	X	Y
<u>B 00017</u>		IND	3295.54	TRI-STATE ASSOC., INC.	MK	<u>B 00028 A</u>		Shallow	4	2	2	26	12N 10W	240248	3903882*
<u>B 00028</u>		MON	1838.855	UNITED NUCLEAR-HOMESTAKE	MK	<u>B 00028 A</u>		Shallow	4	2	2	26	12N 10W	240248	3903882*
<u>B 00028 A</u>		IND	982.515	HOMESTAKE MINING COMPANY	MK	<u>B 00028 A</u>		Shallow	4	2	2	26	12N 10W	240248	3903882*
					MK	<u>B 00028 A-EXPL</u>		Shallow		2	3	26	12N 10W	239317	3903207*
<u>B 00028 AA</u>		IRR	144.45	HOMESTAKE - SAPIN PARTNERS	MK	<u>B 00028 A</u>		Shallow	4	2	2	26	12N 10W	240248	3903882*
<u>B 00028 AB</u>		IRR	51.102	NEW MEXICO HIGHWAY DEPT	MK	<u>B 00028 A</u>		Shallow	4	2	2	26	12N 10W	240248	3903882*
<u>B 00035 AB</u>		IND	289.03	PLAINS ELECTRIC GENERATION	MK	<u>B 00035 AB</u>		Shallow		3	3	23	14N 12W	219873	3924359*
					MK	<u>B 00035 AB-S</u>		Shallow		4	4	23	14N 12W	221080	3924292*
					MK	<u>B 00035 AB-S-2</u>		Shallow				23	14N 12W	220476	3924962*
					MK	<u>B 00035 AB-S-3</u>		Shallow				23	14N 12W	220476	3924962*
					MK	<u>B 00035 AB-S-4</u>		Shallow				23	14N 12W	220476	3924962*
<u>B 00087</u>		IRR	15.03	TRI STATE GENERATION AND TRANS	MK	<u>B 00087 B-S-2</u>		Shallow		3	1	23	14N 12W	219912	3925152*
					MK	<u>B 00087 B-S-4</u>		Artesian	3	3	4	23	14N 12W	220576	3924213*
<u>B 00087 B</u>		IND	577.5	TRI-STATE ASSOC., INC.	MK	<u>B 00087 B-S</u>		Shallow		2	4	23	14N 12W	221099	3924674*
					MK	<u>B 00087 B-S-3</u>		Shallow		4	4	23	14N 12W	221080	3924292*
					MK	<u>B 00087 B-S-4</u>		Artesian	3	3	4	23	14N 12W	220576	3924213*
					MK	<u>B 00087 B-S-6</u>		Shallow	1	1	3	23	14N 12W	219791	3924855*
					MK	<u>B 00087 B-S-7</u>		Shallow		3	4	27	14N 12W	219018	3922784*

*UTM location was derived from PLSS - see Help

(acre ft per annum)					(quarters are 1=NW 2=NE 3=SW 4=SE) (quarters are smallest to largest) (NAD83 UTM in meters)									
WR File Nbr	Sub basin	Use	Diversion	Owner	County	POD Number	Grant	Source	q q q 6416 4 1 3 27	Sec	Tws	Rng	X	Y
					MK	<u>B 00087 B-S-8</u>							218231	3923237*
					MK	<u>B 00087 POD10</u>		Shallow	4 2 3	23	14N	12W	219659	3924204
					MK	<u>B 00087 POD9</u>		Shallow	4 2 3	23	14N	12W	220366	3924602
<u>B 00100</u>	DOM	3		(b) (6)	MK	<u>B 00100</u>		Shallow						
<u>B 00107</u>	DOM	3			MK	<u>B 00107</u>		Shallow	1 1 3	27	11N	10W	236907	3893789*
<u>B 00158</u>	DOM	3			MK	<u>B 00158 X</u>		Shallow	2 3 4	18	15N	18W	156928	3937899*
<u>B 00188</u>	PRO	0		DERWOOD SUTTON	MK	<u>B 00188</u>		Mixed		02	12N	10W	239686	3909861*
<u>B 00343 A</u>	IRR	0		PLAINS ELECTRIC GENERATION AND	MK	<u>B 00343 A</u>			1 1 1	25	12N	11W	230835	3904380*
<u>B 00361</u>	IND	101.12		EL PASO NATURAL GAS COMPANY	MK	<u>B 00361</u>		Artesian	3 3 3	33	14N	13W	206770	3921558*
					MK	<u>B 00361 CLW</u>		Artesian	1 1 1	04	13N	13W	206762	3921357*
					MK	<u>B 00361 S</u>		Artesian	4 3 3	33	14N	13W	206970	3921558*
<u>B 00362</u>	MIN	0		RIO ALGOM MINING LLC	MK	<u>B 00362</u>		Artesian	4 1 4	22	14N	10W	238435	3924036*
<u>B 00363</u>	MIN	0		RIO ALGOM MINING LLC	MK	<u>B 00363</u>		Artesian	2 2 4	22	14N	10W	238835	3924236*
<u>B 00364</u>	MIN	0		ANDERSON DEVELOPMENT CORP.	MK	<u>B 00364</u>		Artesian	1 2 2	30	14N	09W	243460	3923276*
<u>B 00365</u>	MIN	0		ANDERSON DEVELOPMENT CORP.	MK	<u>B 00365</u>		Artesian	2 3	20	14N	09W	244399	3923952*
<u>B 00366</u>	MIN	0		RIO ALGOM MINING LLC	MK	<u>B 00366</u>		Artesian	1 4	24	14N	10W	241563	3924043*
<u>B 00371</u>	MIN	0		SABRE-PINON CORPORATION	MK	<u>B 00371</u>			3 1	25	14N	10W	240716	3922861*
<u>B 00372</u>	MIN	0		SABRE-PINON CORPORATION	MK	<u>B 00372</u>			4 1	23	14N	10W	239552	3924525*
<u>B 00373</u>	MIN	0		RIO ALGOM MINING LLC	MK	<u>B 00373</u>		Artesian	4 1 2	22	14N	10W	238453	3924864*
<u>B 00374</u>	MIN	0		RIO ALGOM MINING LLC	MK	<u>B 00374</u>		Artesian	4 3 3	03	14N	11W	228111	3928762*
<u>B 00375</u>	IND	93.55		PHILLIPS PETROLEUM COMPANY	MK	<u>B 00375</u>		Artesian	4 3 2	28	14N	09W	246490	3922606*
<u>B 00376</u>	IND	371		UNITED NUCLEAR CORPOATION	MK	<u>B 00376</u>		Artesian	2 4 4	28	14N	09W	246866	3921950*

*UTM location was derived from PLSS - see Help

STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
Mining and Minerals Division
1220 St. Francis St.
Santa Fe, New Mexico 87505
Telephone: (505) 476-3400

MINING INSPECTION REPORT

Name of Operator: United Nuclear Corporation (UNC)
Name of Mine: Anne-Lee and John-Bill Mines
Address: P.O. Box 3077, Gallup, NM 87305
Permit Number: MK027PR and MK028PR
Commodity: Prior Reclamation Uranium Sites <u> X </u> SURFACE <u> </u> UNDERGROUND
Date of Inspection: 11-15-2007
Time of On-Site Inspection: 10:30 ~15:30
Weather Conditions: ~55° to 65°F, cool/mild, dry, mostly clear, breezy
Purpose of Inspection: Re-Vegetation Success Monitoring & Prior Reclamation Inspection
Lead Inspector: Holland Shepherd – MMD
Present During Inspection: MMD: Holland Shepherd, James Hollen, Susan Lucas-Kamat; UNC: Larry Bush + one field staff
ENFORCEMENT ACTION TAKEN: None NOTICE OF VIOLATION: # <u> </u> YES: <u> </u> NO: <u> X </u> CESSATION ORDER: YES: <u> </u> NO: <u> X </u>
Time: On-Site: <u> 5 </u> Permit Review: <u> 2 </u> Travel: <u> 6 </u> Report Writing: <u> 2 </u> TOTAL INSPECTION TIME: <u> 15 </u> HOURS
NOTES: Both of the reclaimed uranium mine sites, Anne-Lee and John-Bill, are situated within the Ambrosia Lake Mining District, located approx. 20 miles north-northwest of Grants off State Rd. 509 in McKinley County, New Mexico. A series of locked gates require access permission obtained through UNC. A high clearance, 4WD vehicle is required when surface conditions are wet or snow covered. Anne-Lee Mine: (T 14 N, R 9 W, Sec. 27, N.M.P.M.) John-Bill Mine: (T 14 N, R 9 W, Sec. 34, N.M.P.M.) U.S.G.S. 7.5' Series Quadrangle Map: <i>Ambrosia Lake</i>

INSPECTION REPORT
11-15-07
Anne-Lee Mine – MK027PR
John-Bill Mine – MK028PR

PERMIT UPDATE:

July 16, 1993, June 21 & 29, 1994 – UNC submits information to MMD identifying mining operations pursuant to requirements of Section 5D of the 1993 NM Mining Act.

August 25, 1994 – MMD advises UNC that a deadline for filing site assessments of identified sites had passed on June 30, 1994 and that in order for UNC to come into compliance with the NMMA, UNC would be required to either complete site assessments for each of the identified properties, or provide written documentation that UNC is not the responsible party for these sites, or submit application to MMD for consideration of prior reclamation.

August 26, 1994 – UNC submits application to MMD requesting inspection of the Anne-Lee and John-Bill Sites for release from the requirements of the NMMA for Prior Reclamation completed.

October 19, 1994 – UNC states in a letter to MMD that the identified sites should be considered as abandoned mines and therefore, are not subject to the Act, and while they do not object to evaluating the identified sites for prior reclamation, UNC states further that, they believe that they have no obligation to comply with permitting or any other regulatory requirements of the NMMA for the identified mines.

November 15, 1994 – MMD states that while it disagrees with UNC's determination that the identified properties should be excluded from the Act, MMD approves UNC request to evaluate the Anne-Lee and John-Bill sites for Prior Reclamation completed.

August 3, 1995 – MMD Report on July 13, 1995 Anne-Lee and John-Bill Site Inspections.

September 29, 1995 – MMD determines that Prior Reclamation measures completed at the Anne-Lee and John-Bill sites do not satisfy the requirements of the NMMA. MMD informs UNC that it may either apply for a Variance from the requirements of the NMMA, or submit to MMD, a permit application and Closeout Plan for an Existing Mining Operation.

November 29, 1995 – UNC petitions the MMD determination and appeals to the NM Mining Commission.

April 29, 1997 – The NM Mining Commission dismisses UNC's appeal without prejudice.

May 29, 1997 – UNC advises the Commission it would dismiss the 1995 petition and seek Variance from MMD.

June 3, 1997 - UNC applied to MMD for Variance from Prior Reclamation requirements and extend compliance period by two growing seasons before MMD determination of compliance.

MMD granted UNC a variance through CY 1998 to extend compliance period with the NMMA.

May 25, 1999 – MMD determines that, through results of site inspections completed in Fall 1998, the Anne-Lee and John-Bill Sites continue to fail in meeting prior reclamation criteria for release

from NMMA and must be permitted as an Existing Mining Operation.

MMD extends UNC's 1998 Variance through CY 2000.

UNC's Variance expired in 2000 and since, UNC has failed to permit the Anne-Lee and John Bill Sites which have been determined by MMD to qualify as existing mines under NMSA 1978, Section 69-36-3 (E).

2007 – MMD conducts a review of previously active uranium mine sites in New Mexico, including UNC's Anne-Lee and John-Bill Sites.

June 15, 2007 – MMD informs UNC that the permitting compliance issues must be finally resolved either by conducting current site inspections to determine compliance with the Act, or by MMD filing motion with the NM Mining Commission requesting dismissal of UNC's appeal for non-prosecution.

July 10, 2007 – UNC agrees to allow MMD access to the Anne-Lee and John-Bill sites for inspection.

November 15, 2007 – Site Inspections completed by MMD at the Anne-Lee and John-Bill sites. Evaluation of data is ongoing and compliance determinations are pending from MMD.

INSPECTION NARRATIVE:

The site inspections were arranged by MMD through Larry Bush of UNC. MMD personnel met Larry Bush and one other UNC field staffer in Grants, and then followed Larry to the Ambrosia Lake District. In addition to observing the current status of each of the reclaimed sites for overall integrity and erosional stability, the purpose of the site inspections was to conduct vegetation monitoring and sampling transects to observe progress and determine success of ongoing re-vegetation efforts carried out at each site. Initial site re-vegetation efforts have failed to meet success criteria for release under prior reclamation and results from vegetative sampling conducted by MMD during the last site inspections completed in summer of 1995 indicated that, neither the Anne Lee site, nor the John Bill site, had reached required plant density or species diversity for release from the NMMA. The surfaces of both sites were highly erodible and very dry and according to Larry, the general area had not received any significant or measurable precipitation in over two months.

The Anne-Lee Mine consists of a reclaimed, concrete-plugged and buried mine shaft feature situated within an area approximately 1/10 acre in size. While the immediate area of the reclaimed shaft was re-seeded in 1994, prior to that, the surrounding area associated with the Anne-Lee Mine was reclaimed in the early 90's as part of the UMTRCA Title 1 reclamation completed by the DOE. The feature consists of a roughly square shaped, mound-like expression, rising approximately 20' above the surrounding land surface. A sealed, underground mine vent shaft feature and a groundwater monitoring well are also present in the immediate area and GPS locations of these features were acquired. Moderately steep outcrops extend some 40' to 60' outward from a slightly depressed and undulating, but generally flat, top-surface. Only the top surface of the feature is fenced to exclude cattle from grazing in the area and to protect the re-vegetation and reclamation aspects of the site from erosion issues and unauthorized grazing. Cattle activity along the unfenced outcrops of the feature have impacted existing vegetation and disturbed the surface soils creating potential erosion problems although no immediate erosion issues were observed. Although Larry Bush indicated that the shaft has settled and subsided on

numerous occasions over the years, it appeared stable during the inspection and Larry indicated that it had been stable for several years now. Larry mentioned that some of the reasons for such difficulty in attaining re-vegetation success standards at this site were partially due to settling within the buried shaft feature causing subsidence and collapse at the surface. The subsidence activity would require UNC to import fill to cover and re-contour the collapsed areas to original conditions. According to Larry, each collapse would drastically disturb and re-work the existing surface soils and any established vegetation growing on the site and setback UNC's reclamation and re-vegetation efforts.

Bioturbation through rodent activity within surface soils is also abundantly evident throughout the top surface and out slopes of the mound feature and has also contributed to the overall difficulties in establishing well-stabilized surfaces necessary for successful re-vegetation of the site. The heaviest bioturbation was observed along the northwest corner of the mound feature where vegetation was sparse and rodents have reworked surface soils and redistributed subsurface soils onto the surface of the mound feature by tunneling and excavating in this area. At this location (NW corner) gamma radiation levels were detected as being slightly elevated and above normal background gamma radiation levels, probably associated with this bioturbation activity. Background gamma radiation levels measured randomly throughout the surface of the Anne-Lee Site ranged from 6~11 $\mu\text{R/hr}$.

Larry indicated that prior reclamation work completed in the area by the DOE, scraped and removed most of the original post-mining topsoil surfaces of the surrounding area. He said that during active underground mining, no mined material had been dumped or stockpiled at the Anne-Lee location and the only purpose for this site was for use as an ore load-out shaft associated with the underground Sandstone Mine. Uranium ore was hoisted from the mine to the surface at this location using a head-frame hoist (removed). Ore was then hauled away from this location in haul trucks.

Two 50' vegetation transect surveys were completed in one-foot sampling intervals across the top surface of the mound feature from corner to corner. GPS coordinates were acquired at each of the locations designating the point of beginning and ending for both transects. The occurrence of grasses, forbs and shrub species, as well as, bare-ground and surface plant litter were recorded at each one-foot interval of the taped transect. Vegetation is mostly dormant, very sparsely distributed throughout the site and consists predominantly of Russian thistle and snakeweed. Also observed were four wing saltbrush, rubber rabbitbush, purple aster, alkali sacaton, western wheatgrass, and Indian rice grass. Larry indicated during the inspection that UNC would voluntarily re-seed the Anne-Lee reclamation area and that if MMD could provide him with an approved seed-mix and application rates, UNC would attempt to re-seed the reclamation area of the Anne-Lee in spring 2008.

The John-Bill Mine consists of reclaimed area of approximately 4 acres in size, and like the Anne-Lee site, is also a plugged and buried mineshaft feature initially reclaimed and seeded in 1994. Aside from an abandoned, wooden-framed electrical substation structure existing on site, no open shaft or any other mine related features are visible and the area is flat to gently undulating. Larry remarked that because of the failure of several previous re-vegetation attempts, the John-Bill site had been re-seeded 3 times subsequent to their initial reclamation efforts. A division is visible in the immediate vicinity surrounding the site clearly delineating the existing dominant vegetation (Russian thistle) from the vegetation present within the reclaimed area of the John-Bill site. Although the reclamation area of the John-Bill is also dominated by invasive Russian thistle and snakeweed, also observed within the reclamation area were well-established stands of native vegetation. As observed on the Anne-Lee site, a similar vegetation community exists at the John-Bill site. Notably different at the John-Bill, was the abundance of winterfat within the vegetative

community.

GPS coordinates were acquired at each of the locations designating the point of beginning and ending for both transects completed on the John-Bill site. The vegetation transect surveys completed at the John-Bill site were randomly generated and established by utilizing the same sampling grid and methodologies established during previous vegetation transect surveys completed in October 1998.

Because no vegetation reference area exists for either the Anne-Lee or the John-Bill sites, by which to judge whether the sites allow for designation as a self-sustaining ecosystem pursuant to the Act, the reference standard used for comparison by MMD in this case, is the NRCS Range Site Description for this area designated by the NRCS as WP-2, Sandy. Further statistical analyses using the quantitative results obtained from each vegetation transect survey completed on both sites will be required to determine whether the average percent cover values for each site have been attained and meet re-vegetation success criteria for release from the Act.

Upon completion of the vegetation transect surveys of the John-Bill; MMD concluded the site inspection by briefly discussing with Larry, the path forward. MMD indicated that based on lack of vegetation and overall poor field conditions observed at the Anne-Lee reclamation, release based on prior reclamation for this site was unlikely and that at minimum, the site would need re-seeding. MMD indicated that because the John-Bill site exhibited more successfully established re-vegetation conditions, results of pending statistical analysis of the transect data would have to be completed prior to MMD's determination of compliance with the Act.

ACTION ITEMS:

Complete statistical analysis of data obtained from vegetation transect surveys.

Recommend a seed-mix suitable for UNC to utilize in future re-vegetation efforts at the Anne-Lee Site.

Determine compliance with the Act.

PHOTOS:

Photos taken during this field inspection can be found archived at the following location:
L:\MARF\PriorReclamation

MAINTENANCE ITEMS:

Recommend that UNC extend fencing to include outcrops of the mound feature and exclude cattle from all reclaimed areas at the Anne-Lee Site. Fencing should be in accordance with NMDG&F Fencing Guidelines.

Recommend that UNC reseed the entire Anne-Lee reclamation area. The area should be mulched and re-seeded by hand broadcasting and raking an approved seed-mix into the surface. A recommended seed mix consisting of grasses and forbs, as well as, the suggested rates of application are specified below in lbs. pure live seed (PLS) per acre (lbs./ac.):

Blue Grama – Hatchita 1.0
Crested Wheat Grass 5.0
Western Wheat Grass 2.5

Indian Rice Grass 1.0
Alkali Sacaton .5
Sand Dropseed 1.5
Winterfat ??

ENFORCEMENT ACTIONS TAKEN OR TO BE CONSIDERED:

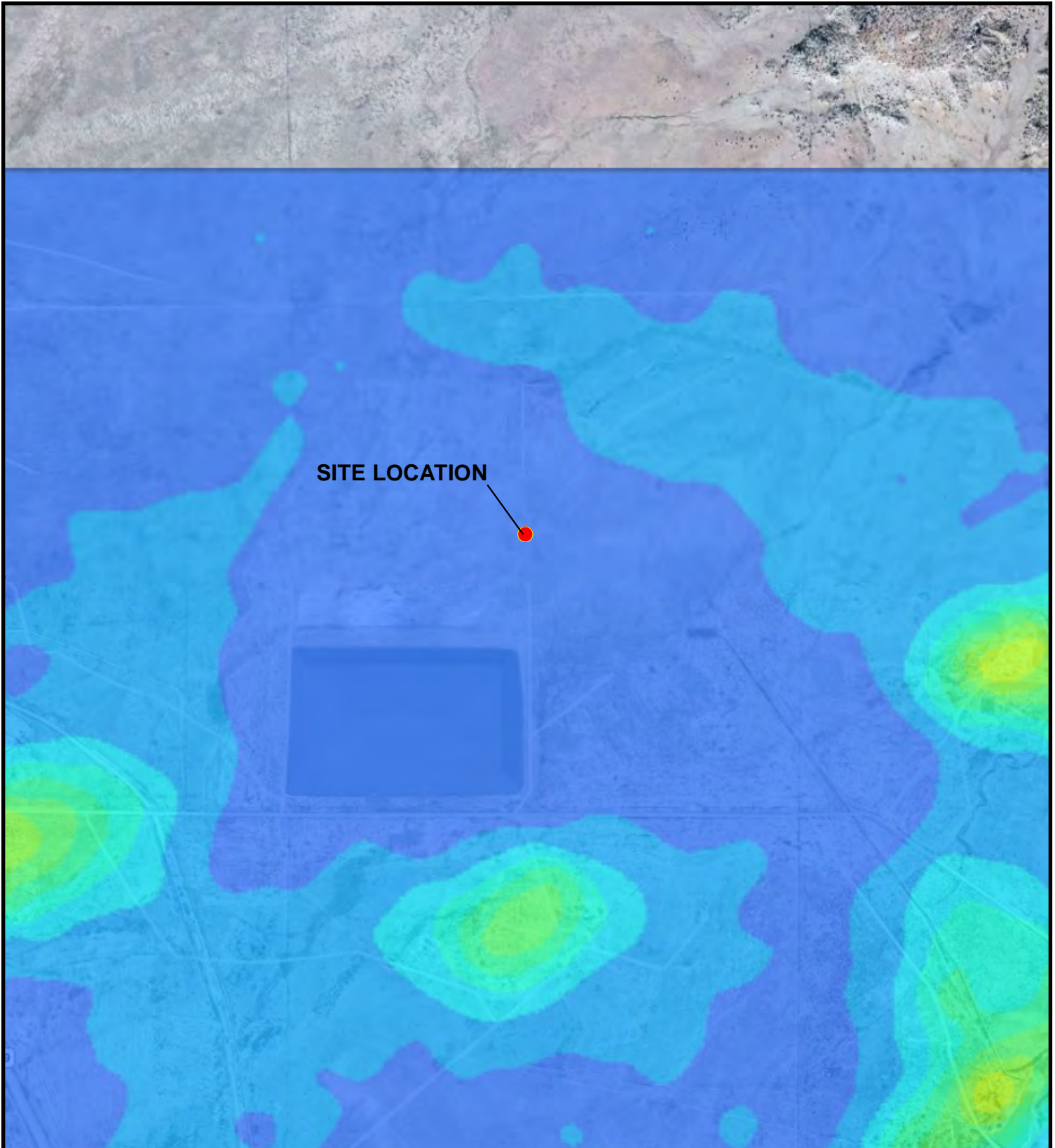
Utilize results of the November 2007 Site Inspections to determine compliance or necessary steps for UNC to complete in order to obtain compliance with the Act.

UNC should provide MMD with a plan for moving forward in resolving compliance issues related to these sites pursuant to the Act, and provide a reclamation plan that includes a schedule of proposed activities.

INSPECTOR'S SIGNATURE: _____ **DATE:** _____

ATTACHMENT B

EPA - ASPECT CONCENTRATION MAP



LEGEND

● SITE LOCATION

Parameter: eU concentration (pCi/g)	
Blue	< 5,000
Cyan	5,000 : 10,000
Green	10,000 : 15,000
Yellow-Green	15,000 : 20,000
Yellow	20,000 : 25,000
Orange	25,000 : 30,000
Red-Orange	30,000 : 35,000
Red	35,000 : 40,000
Magenta	40,000 : 45,000
Pink	> 45,000

0 700 1,400

SCALE IN FEET

NEW MEXICO

**US EPA REGION 6
START- 3**

ATTACHMENT B
EPA-ASPECT CONCENTRATION MAP
ANN LEE URANIUM MINE SITE
AMBROSIA LAKE AREA
MCKINLEY COUNTY, NEW MEXICO

TDD NO: TO-0035-11-06-01
CERCLIS NO: NMN000607165
SOURCE: BING MAP HYBRID SERVICE

DATE DEC 2011	PROJECT NO 20406.012.035.0643.01	SCALE AS SHOWN
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ATTACHMENT C

TDD NO. TO-0035-11-06-01 AND AMENDMENT A

35.414462
107.795426

EPA
U.S. EPA
Washington, DC 20460

1975x

START3
Technical Direction Document

TDD #: TO-0035-11-06-01
Contract: EP-W-06-042

Assessment/Inspection Activities -
Enforcement Funds (0035)
Weston Solutions, Inc.

! = required field ☐ Moved To EAS

Note: Remaining Amount
includes \$0.00 in Reserve.

TDD Name: Ann Lee Uranium Mine		! Period: Base Period
! Purpose: Work Assignment Initiation, Set/Revise Expenditure Limit		
! Priority: High	! Start Date: 06/30/2011	
Overtime: Yes	! Completion Date: 12/30/2011	
! Funding Category: Enforcement Funds	Invoice Unit:	
! Project/Site Name: Ann Lee Uranium Mine		WorkArea: ASSESSMENT/INSPECTIONS ACTIVITIES
Project Address:		Activity: Integrated Assessment (IA)
County: McKinley County	Work Area Code:	
City, State: , NM	Activity Code:	
Zip:	EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
! SSID: A6BA	FPN:	
CERCLIS: NMN000607165	Performance Based: No	
Operable Unit:		
Authorized TDD Ceiling:	Cost/Fee	LOE (Hours)
Previous Action(s):	\$0.00	0.0
This Action:	\$25,000.00	0.0
New Total:	\$25,000.00	0.0

Specific Elements Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

Description of Work:

All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.

The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at price.lisa@epa.gov or 214-665-6744, upon receipt of the TDD.

Accounting and Appropriation Information

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriati on Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	ENC012	XXX	11	T	06S	302EC7C	2505	A6BAEA00	C001	\$25,000.00

Funding Summary:	Funding
Previous:	\$0.00
This Action:	\$25,000.00
Total:	\$25,000.00

Funding Category
Enforcement Funds

Section

- Signed by Linda Carter/R6/USEPA/US on 06/29/2011 08:19:52 AM, according to Jeff Criner/start6/rfw

: Lisa Price Date: 06/28/2011

Project Officer Section - Signed by Cora Stanley/R6/USEPA/US on 06/29/2011 10:27:04 AM, according to

Project Officer: Linda Carter Date: 06/29/2011

Contracting Officer Section - Signed by Cora Stanley/R6/USEPA/US on 06/29/2011 10:27:04 AM, according to

Contracting Officer: Cora Stanley Date: 06/29/2011

Contractor Section - Signed by Robert Beck/start6/rfw-start/us on 06/29/2011 07:32:19 PM, according to

☒ No During the past three (3) calendar years has your company, or any of your employees that
☐ Yes will be working at this site, previously performed work at this site/facility?

Contractor Contact: Robert Beck

Date: 06/29/2011

! = required field ☐ Moved To EAS

TDD Name: Ann Lee Uranium Mine		! Period: Base Period
! Purpose: Set/Revise Expenditure Limit, Administrative Change		
! Priority: High	! Start Date: 06/30/2011	
Overtime: Yes	! Completion Date: 12/30/2011	
! Funding Category: Enforcement Funds	Invoice Unit:	
! Project/Site Name: Ann Lee Uranium Mine		WorkArea: ASSESSMENT/INSPECTIONS ACTIVITIES
Project Address:		Activity: Integrated Assessment (IA)
County: McKinley County	Work Area Code:	
City, State: , NM	Activity Code: IA	
Zip:	EMERGENCY CODE: <input type="checkbox"/> KAT <input type="checkbox"/> RIT	
! SSID: A6BA	FPN:	
CERCLIS: NMN000607165	Performance Based: No	
Operable Unit:		
Authorized TDD Ceiling:	Cost/Fee	LOE (Hours)
Previous Action(s):	\$25,000.00	0.0
This Action:	(\$15,000.00)	0.0
New Total:	\$10,000.00	0.0

Specific Elements Assess the potential for short or long term clean-up actions., Perform field screening and analysis of samples.

Description of Work:

All activities performed in support of this TDD shall be in accordance with the contract and TO PWS.

This amendment A is to move \$15,000 from this TDD and split the dollars across the Sandstone, John Bully, Dysart #2, Section 12, and Johnny M Uranium Mine TDDs, i.e., \$3,000 on each TDD. The contractor to date has spent \$6016.91 on this Ann Lee TDD and has submitted a closeout report on this TDD.

The Grants Mining District provided significant uranium extraction and production in New Mexico from the 1950s until late into the 20th century. There are three mining sub-districts within the Grants Mining District: Ambrosia Lake, Laguna, and Marquez. Land ownership within these sub-districts consists of public, tribal and private property. These mining sub-districts contain 97 former legacy uranium mines and five mill sites. The EPA is currently assessing the mine sites for releases that may have impacted soil, surface water and groundwater. Under this TDD, the contractor shall investigate mine water discharge locations, sample potentially impacted soil for elevated concentrations of elemental uranium and radionuclides, sample any surface water present for metals and radionuclides, and sample any accessible groundwater wells in the immediate area of three mine sites in the Ambrosia Lake sub-district. The contractor shall document mine site features (e.g. open mine portals, waste rock piles, mine operation-related structures, etc.) and sample

locations with photographs, descriptions, and geospatially. A draft and final report will be written for the mine site. Coordinate with SAM, Lisa Price at price.lisa@epa.gov or 214-665-6744, upon receipt of the TDD.

Accounting and Appropriation Information

SFO: 22

Line	DCN	IFMS	Budget/ FY	Appropriation Code	Budget Org Code	Program Element	Object Class	Site Project	Cost Org Code	Amount
1	ENC012	XXX	11	T	06S	302EC7C	2505	A6BA1A00	C001	\$-15,000.00

Funding Summary:	Funding
Previous:	\$25,000.00
This Action:	\$-15,000.00
Total:	\$10,000.00

Funding Category

Enforcement Funds

Section

- Signed by Terri Lewis/DC/USEPA/US on 02/29/2012 12:24:31 PM, according to Abel Farias/start6/rfv

: Lisa Price

Date: 02/28/2012

Phone #:

Project Officer Section - Signed by Linda Carter/R6/USEPA/US on 02/29/2012 05:30:02 PM, according to Al

Project Officer: Linda Carter

Date: 02/29/2012

Contracting Officer Section - Signed by Terri Lewis/DC/USEPA/US on 02/29/2012 12:24:31 PM, according to

Contracting Officer: Cora Stanley

Date: 02/29/2012

Contractor Section - Signed by David Crow/start6/rfw-start/us on 03/02/2012 03:41:36 PM, according to

- ☒ No During the past three (3) calendar years has your company , or any of your employees that will
☐ Yes be working at this site , previously performed work at this site /facility?

Contractor Contact: David Crow

Date: 03/02/2012